

Di-Hybrid Crosses

Crosses With 2 Traits

Until Now

- We have been crossing organisms with only 1 trait (height or flower colour)
- These are called mono-hybrid crosses (mono = 1)
- You can cross 2 traits at the same time (called a di-hybrid cross)

<https://www.youtube.com/watch?v=QBZ78zF2UnQ>



Black	Chocolate	Yellow
$BB E F$	$bb E E$	$bb ee$
$Bb E F$	$bb E e$	$Bb ee$
$BB E e$		$BB ee$
$Bb E e$		

Determine the ratio of the offsprings of a cross between these 2 labs

$BbEe \times bbEe$

	bE	be	bE	be
BE	$BbEE$	$BbEe$	$BbEE$	$BbEe$
Be	$BbEe$	$Bbee$	$BbEe$	$Bbee$
bE	$bbEE$	$bbEe$	$bbEE$	$bbEe$
be	$bbEe$	$bbee$	$bbEe$	$bbee$

Black

6

8

Chocolate

6

3

Yellow

4

5

Test Cross

- A **test cross** is often performed to determine the genotype of a dominant phenotype. The test cross is always performed between the unknown genotype and a homozygous recessive genotype.
- Example: A black sheep has a homozygous recessive genotype and it is bred with an unknown white ram. The farmer is trying to figure out if his ram carries a recessive black allele.